♻EPA Coastal Communications

Integrated Monitoring of the Mid–Atlantic Estuaries (Delaware Bay to North Carolina)

Background

The Mid-Atlantic Integrated Assessment Estuaries Program (MAIA-Estuaries) focuses on the region of the United States as defined by the land and near-coastal area from Delaware Bay south through Pamlico Sound (states of NJ, PA, DE, MD, VA, and NC). During the development of the *Condition of the Mid–Atlantic Estuaries* report (EPA 600-R-98-147), a synthesis of data from a large number of different studies, several information gaps were identified. One of the considerations in designing MAIA-Estuaries in 1997 was to fill some of these data gaps. The objectives of this program were to: (1) characterize the ecological condition of the Mid-Atlantic estuaries using a common set of measurements, (2) focus research on small estuaries to help design more efficient monitoring approaches for these critical systems, and (3) to demonstrate that effective partnerships can be established among Federal and state agencies for resource management purposes.

Approach

The Atlantic and Gulf Ecology Divisions of EPA's National Health and Environmental Effects Research Laboratory and a group of partnering agencies (see insert) conducted an intensive field study using a common set of indicators (see below) at over 900 stations during the summers of 1997 and 1998. This partnership recognized that each of these entities plays an important and vital

MAIA-Estuaries sampling stations (red dots)

MAIA–Estuaries Partners

EPA- Offices of Research and Development, Water, and Pesticide Programs; Regions II, III and IV; Chesapeake Bay Program
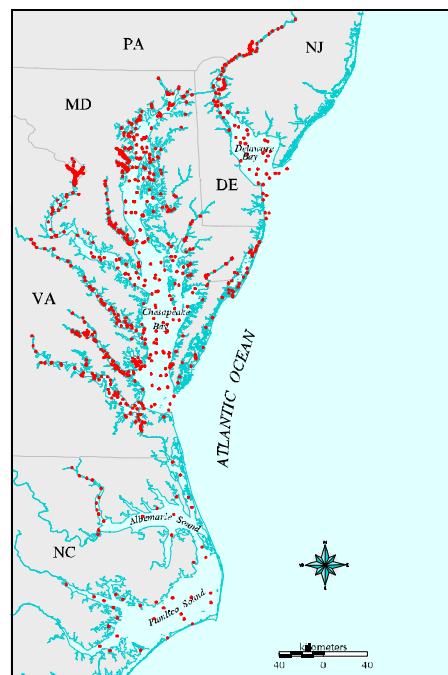**NOAA**
National Park Service
U.S. Fish and Wildlife Service
States of NJ, PA, DE, MD, VA, NC, and the District of Columbia
Delaware River Basin Commission
National Estuary Programs - Delaware Estuary Program, Delaware Inland Bays Program,

role in estuarine monitoring. Traditionally, different agencies have not always monitored the same set of parameters, making data integration difficult. MAIA-Estuaries partners sampled a common set of water quality and sediment indicators in 1997. Fish indicators were monitored at a subset of the stations in 1998. Results of this survey are currently being analyzed and will be publicly available later this year, along with a final report.

Ecological Indicators

Water Quality	**Sediment Quality** (1997 only)	**Fish** (1998 only)
Dissolved oxygen	Grain size	Community structure
Salinity, temperature, pH, depth	Total organic carbon	External pathology
Dissolved & particulate nutrients	Sediment chemistry	Histopathology
Chlorophyll	Sediment toxicity	Tissue chemistry
Secchi depth	Benthic community structure	

Further Information

For further information on MAIA-Estuaries and the current status of data analysis, please contact John Paul (email paul.john@epa.gov or tel. 401-782-3037) or Charles Strobel (email strobel.charles@epa.gov or tel. 401-782-3180) at EPA's NHEERL Atlantic Ecology Division, or visit the MAIA web site at www.epa.gov/maia.